

CCMD Roundtable

Part 2

October 29th, 2021



Objective and guidelines of the Roundtable

Setup of the Roundtable:

- Questions from market parties were clustered in function of 3 topics
- Each topic will be introduced via a short presentation of Elia Group, after which an open roundtable discussion will be held

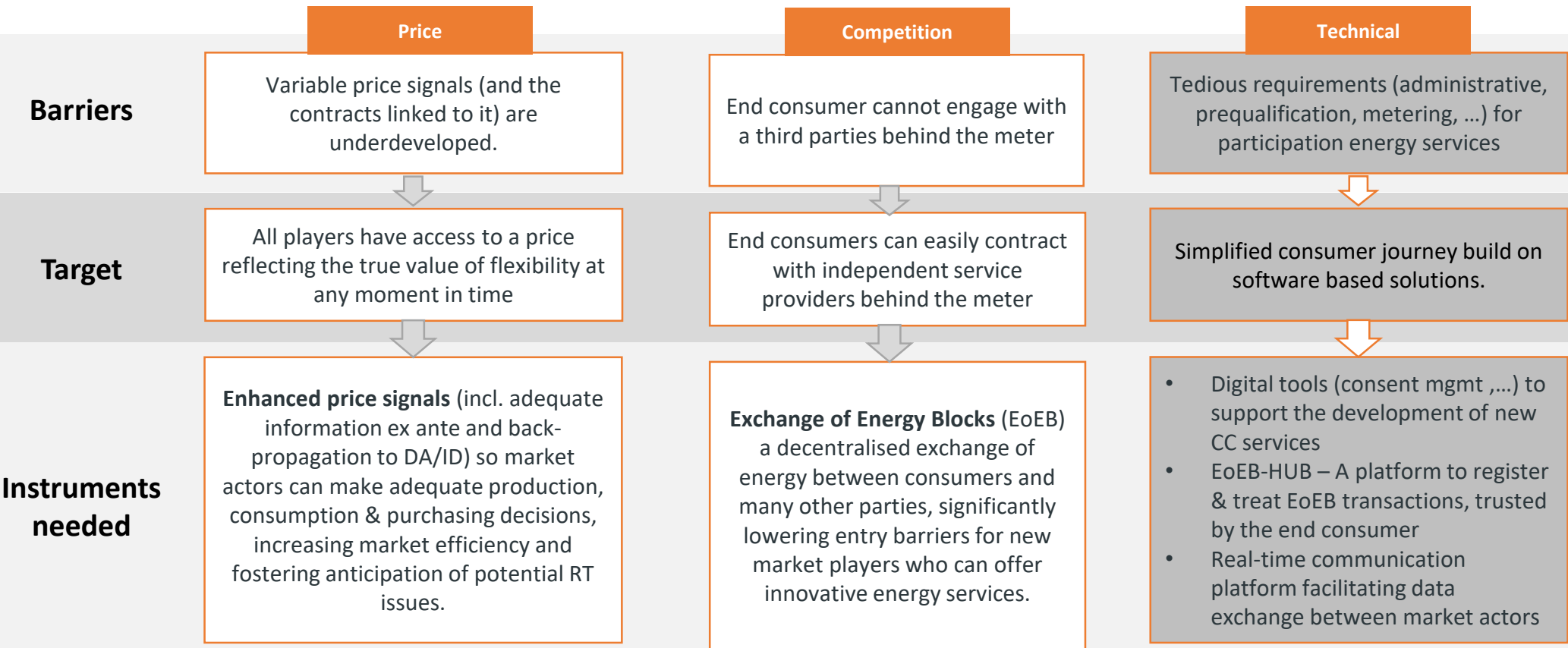
➤ **Objective** of the roundtable discussion is to have an open exchange and acquire additional insights

Topics

- The Exchange of Energy Block HUB to open competition behind the meter – Concept & System;
- Making data available for Energy services;
- EoEB HUB additional features to ensure a trusted & transparent system for all parties.



Recap last round table

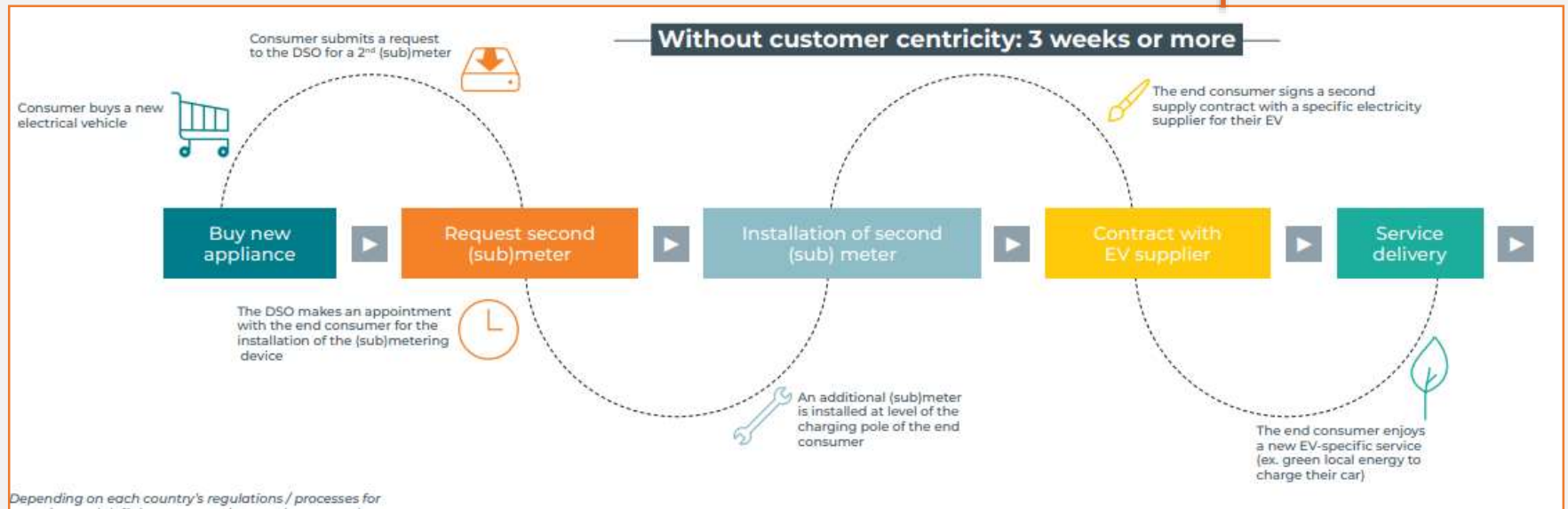


Focus of this Roundtable

Barriers

Technical

Tedious requirements (administrative, prequalification, metering, ...) for participation energy services



Focus of this Roundtable

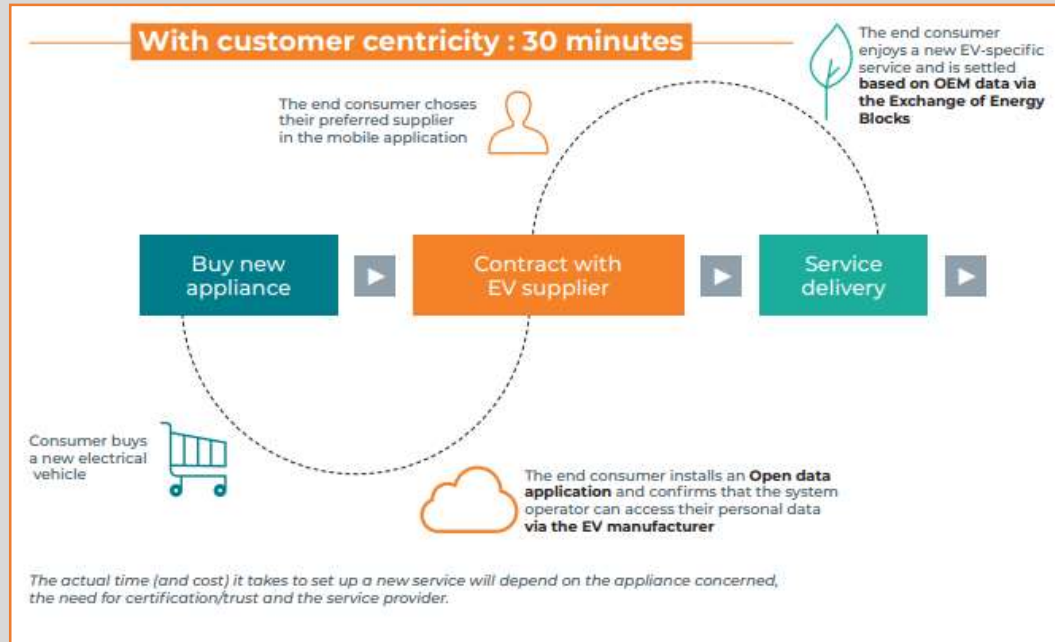
Barriers

Technical 

Tedious requirements (administrative, prequalification, metering, ...) for participation energy services



Target

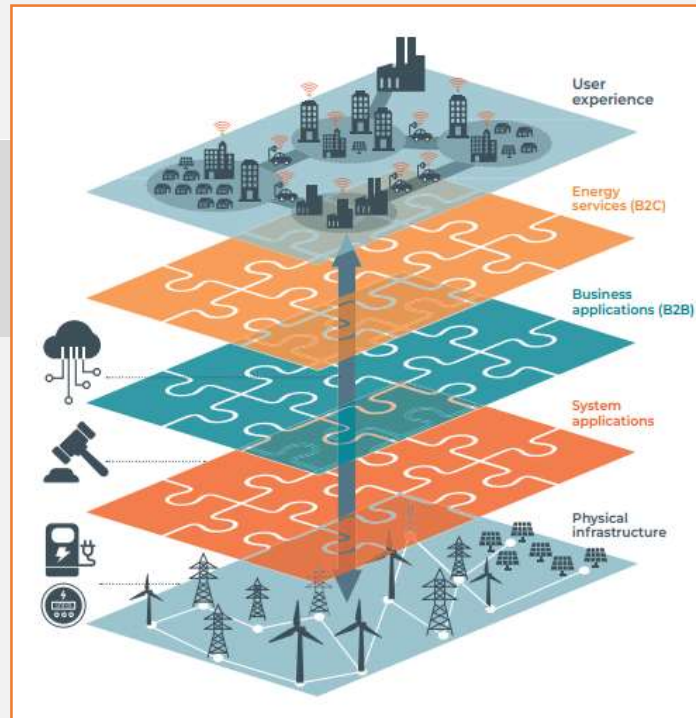


Simplified consumer journey build on software based solutions.

Focus of this Roundtable – A system that easily allows the consumer to participate through Services

Barriers

Target



Technical

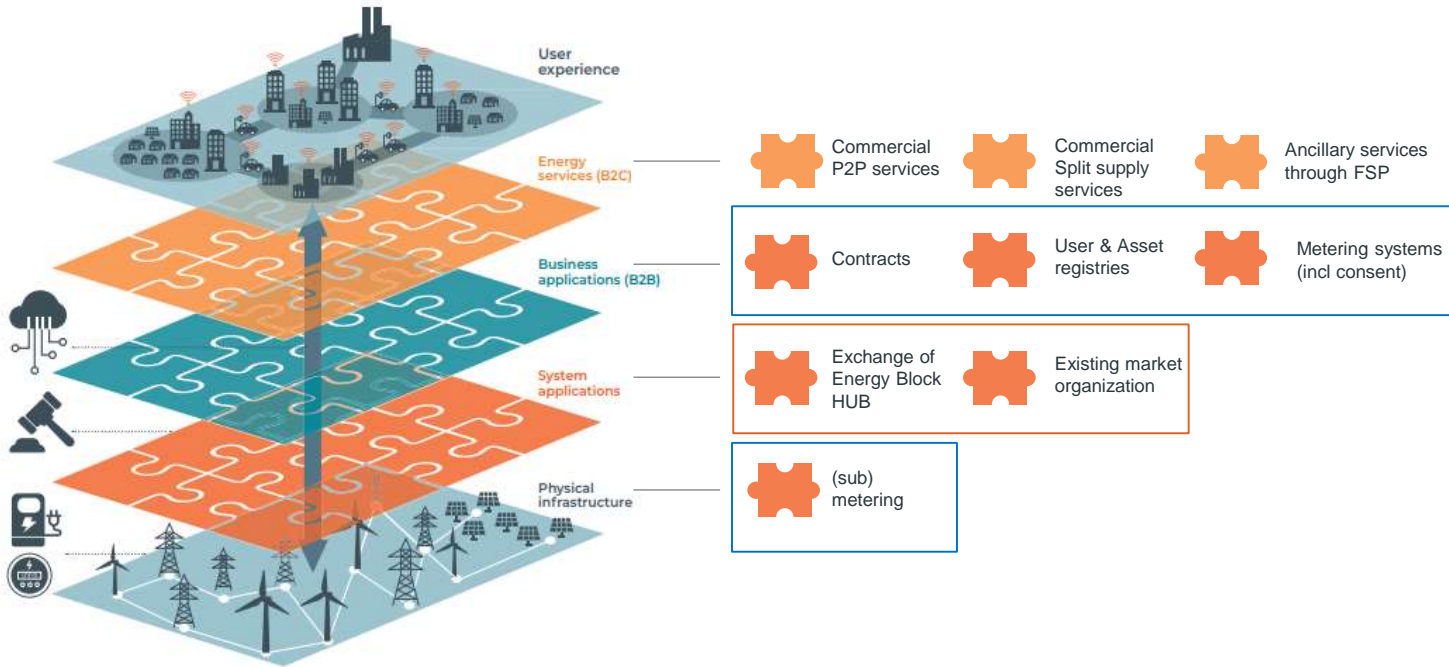
Tedious requirements (administrative, prequalification, metering, ...) for participation energy services

Simplified consumer journey build on software based solutions.

- Digital tools (consent mgmt ,...) to support the development of new CC services
- EoEB-HUB – A platform to register & treat EoEB transactions, trusted by the end consumer
- Real-time communication platform facilitating data exchange between market actors

Instruments needed

A consumer centric system enabling Energy transactions at the level of the consumers



Multiple components are required to enable Energy services

- Peer to peer
- Multiple supplier behind one access point
- Free choice of supplier for an EV
- Explicit balancing services

EoEB HUB – Core by System operators

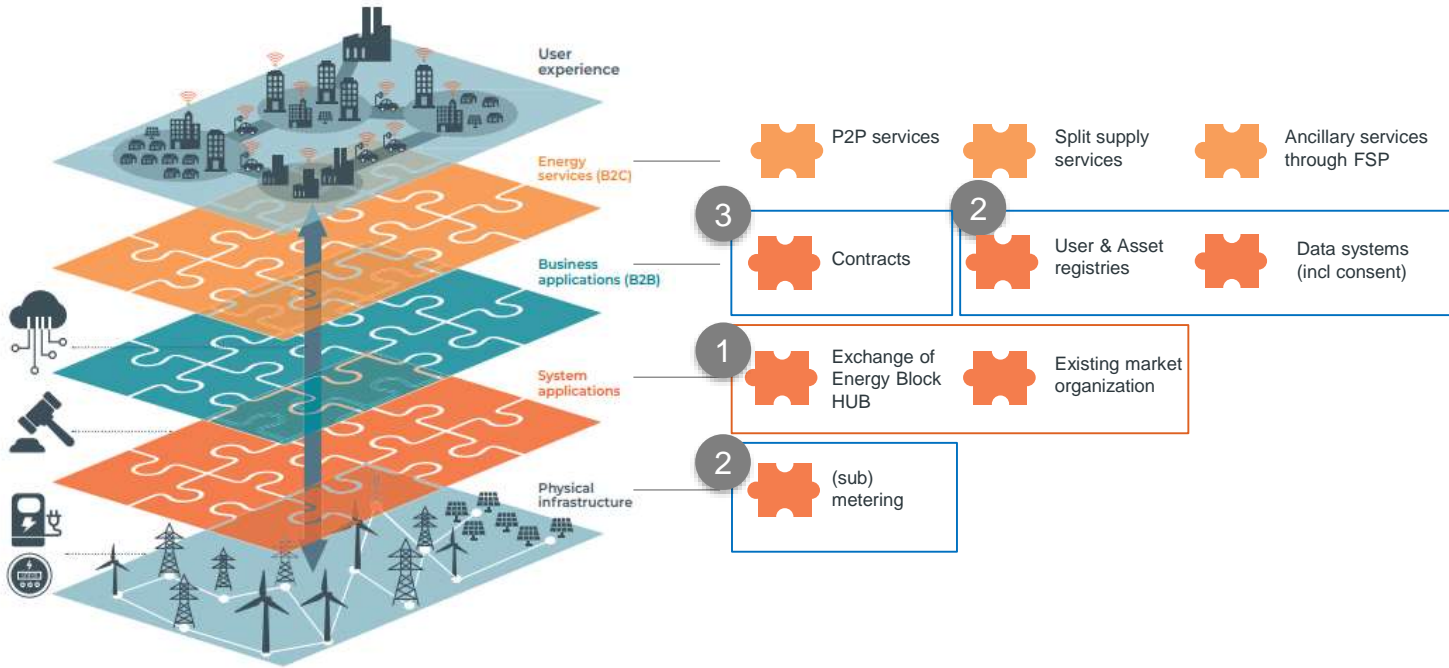
- Limited system layer to have no barriers for innovative products
- Integrated in the existing market organization

Digital tools

- Role of System operators to be defined
- Trusted, consumer centric system



A System enabling Energy transactions at the level of the consumers



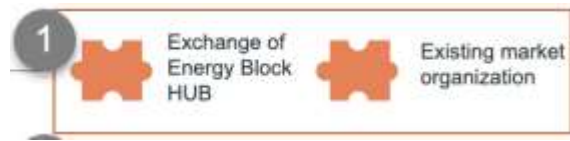
Agenda

1. EoEB HUB – High level concept & system
2. Making data available for the services
3. EoEB HUB – additional features

The current presentation is not the final model! Both platform and digital tools evolve & will evolve constantly to support all services & taking the needs of all stakeholders into account.

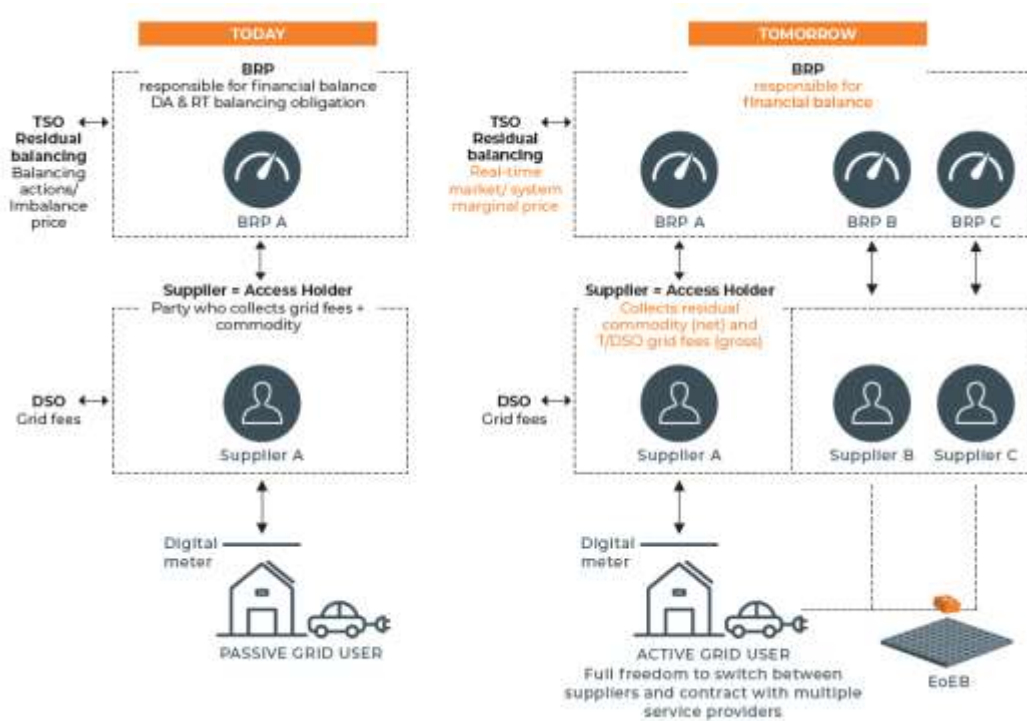
In addition Market rules will be defined to assure a trusted & workable market system with limited transaction costs & manageable risks.

Exchange of Energy Block HUB



Concept & System

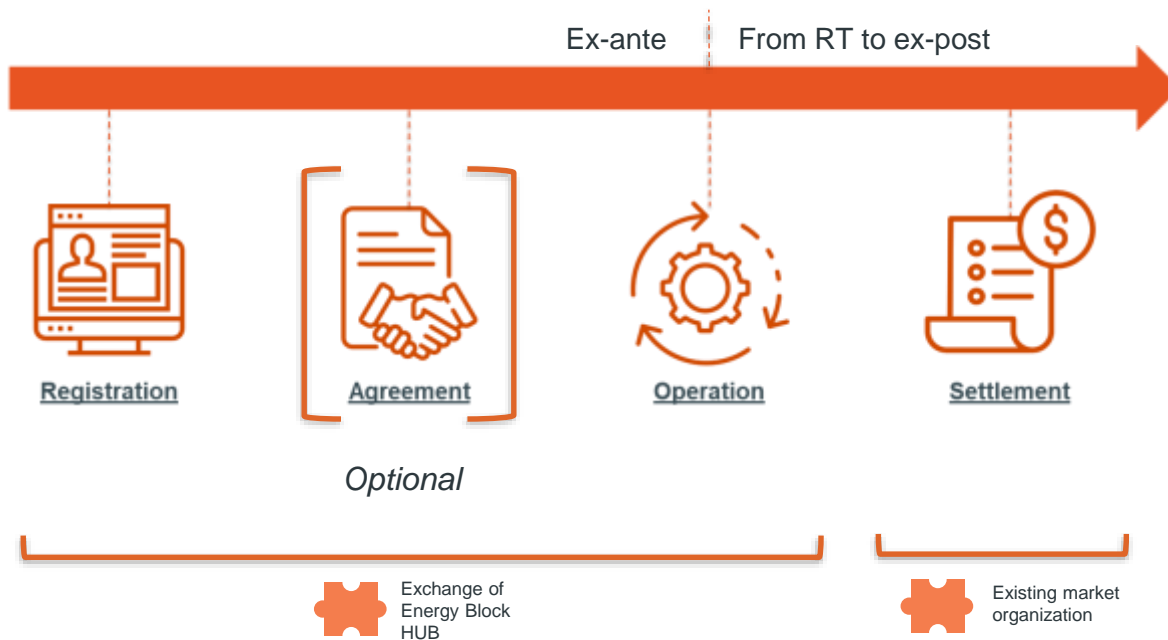
The EoEB hub as an extension of the current market model – Recap of some basic principles



- **Transactional system** allowing exchanges between grid users and suppliers, can be based on private submetering.
- **The Head Supplier (at the access point) settles the residual energy** (measured – EoEB).
- **The Head Supplier settles the grid fee's & levies** based on the physical measured energy.
- **A DSO meter (SRM3) must exist** at the market point where the head supplier is assigned.
- **Every party (head supplier or behind the meter) supplying electricity has a BRP** that takes (financial) responsibility for the energy.
- The EoEB HUB is an **extension** of the current market model & systems creating new options without taking the existing ones away.



The Exchange of Energy Block - high level/minimal process



Registration - Knowing the users & the accesspoint

- Who can create exchanges (ESP & GU)
- Who can validate exchanges on which EAN code

Agreement to validate EoEB's (optional)

- Between Buyer & seller.

Operation

- Receiving EoEB transaction

Settlement - ensuring correct energy settlement with the Residual Supplier

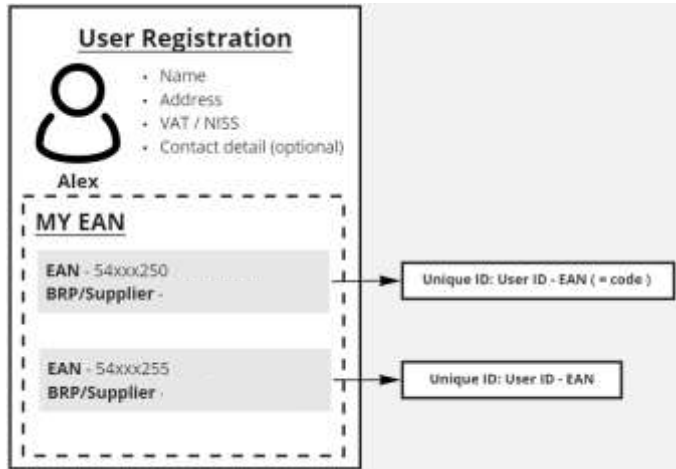
- Integrating the transactions in the current market model



Step 1 - Registration



Registration



Who & Why

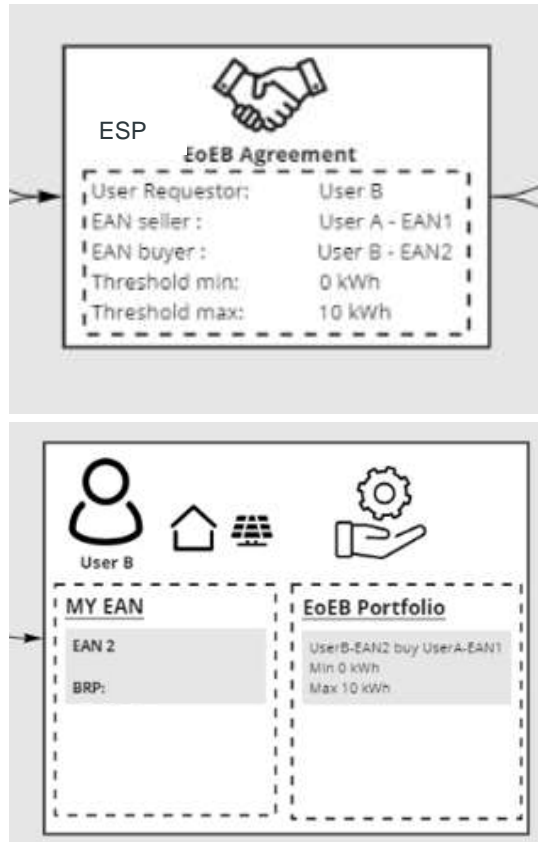
- **“Requesting party”**, being the party submitting EoEB’s,
 - GU
 - Energy Service provider (technology), a facilitating party or an energy Supplier.
- **Exchanging Parties** to validate the EoEBs.
 - Grid User or a delegated party + access points (locations a supplier is assigned)
 - Energy Service providers, taking the role of Supplier & the responsible BRP.



Step 2 - Agreement – Optional but essential to create a consumer centric process



Optional

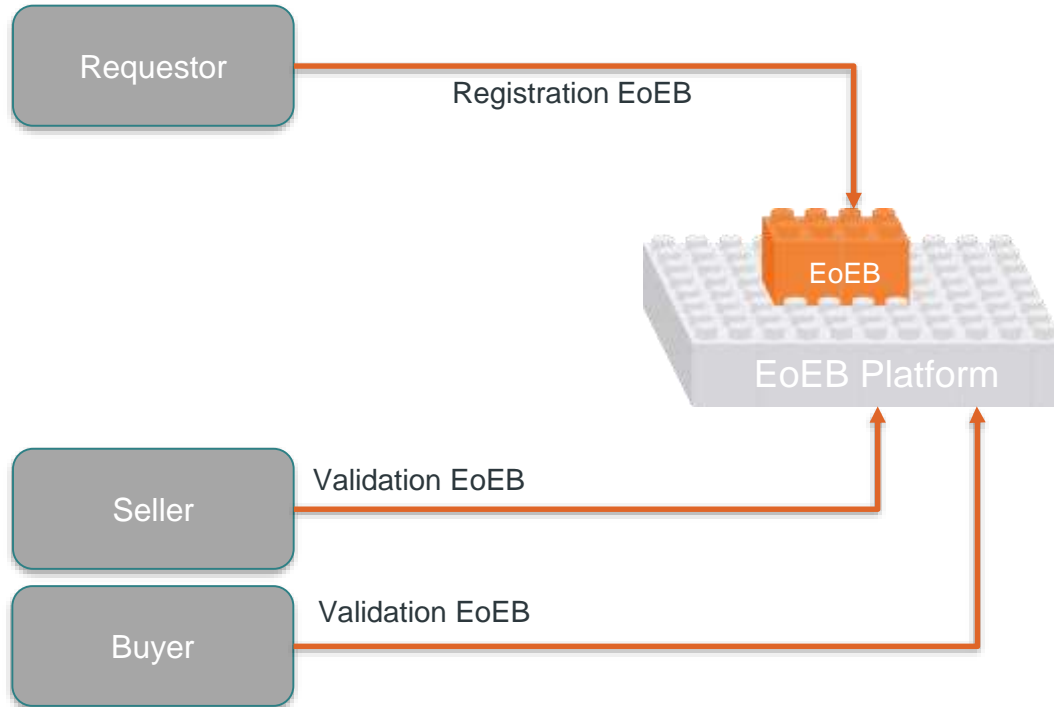


What

- **Auto-validations:** Agreeing that EoEB created by a third party (trusted by the end consumer) are automatically validated.
 - Example: I agree ex-ante on all EoEB that are created by party X are validated.
- **Delegations:** Agreeing that a third party, family, an Energy Service Provider can validate transactions on your behalf.
 - Example: as consumer I want to use a third party app to validate all the Exchange of Energy Blocks.



Step 3 - Operation – creation and validation of the EoEB



- Communicated through API's (& Front End)
- Runs from ex-ante till **deadline an Ex-post** (D+1 14h00 – to be defined)
- Both Buyer & Seller of the electricity validate the transactions, likely through an agreement

Message

- Buyer (Physical access point or party)
- Seller (Physical access point or party)
- Timeframe (Qh)
- Quantity (Wh)

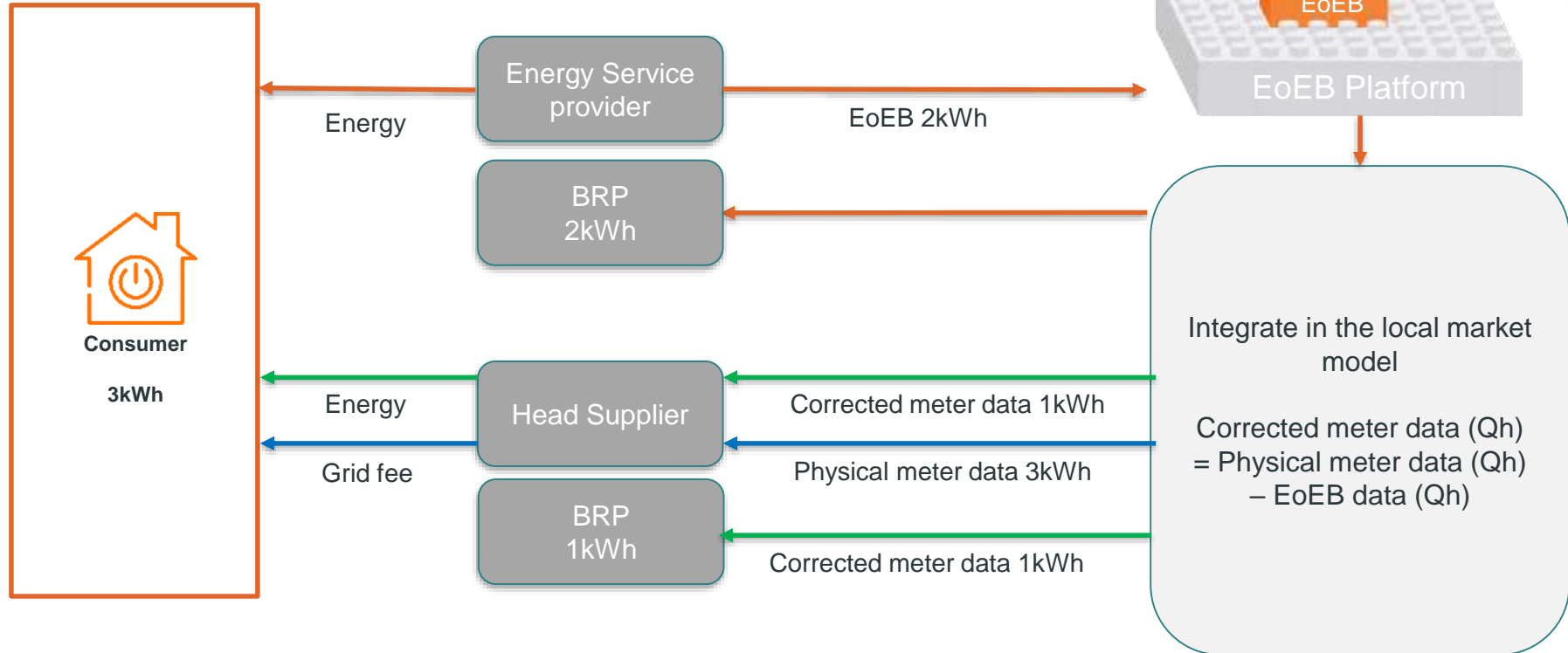


Step 4 – Settlement – integrated in the existing market model



Settlement

Split Supply

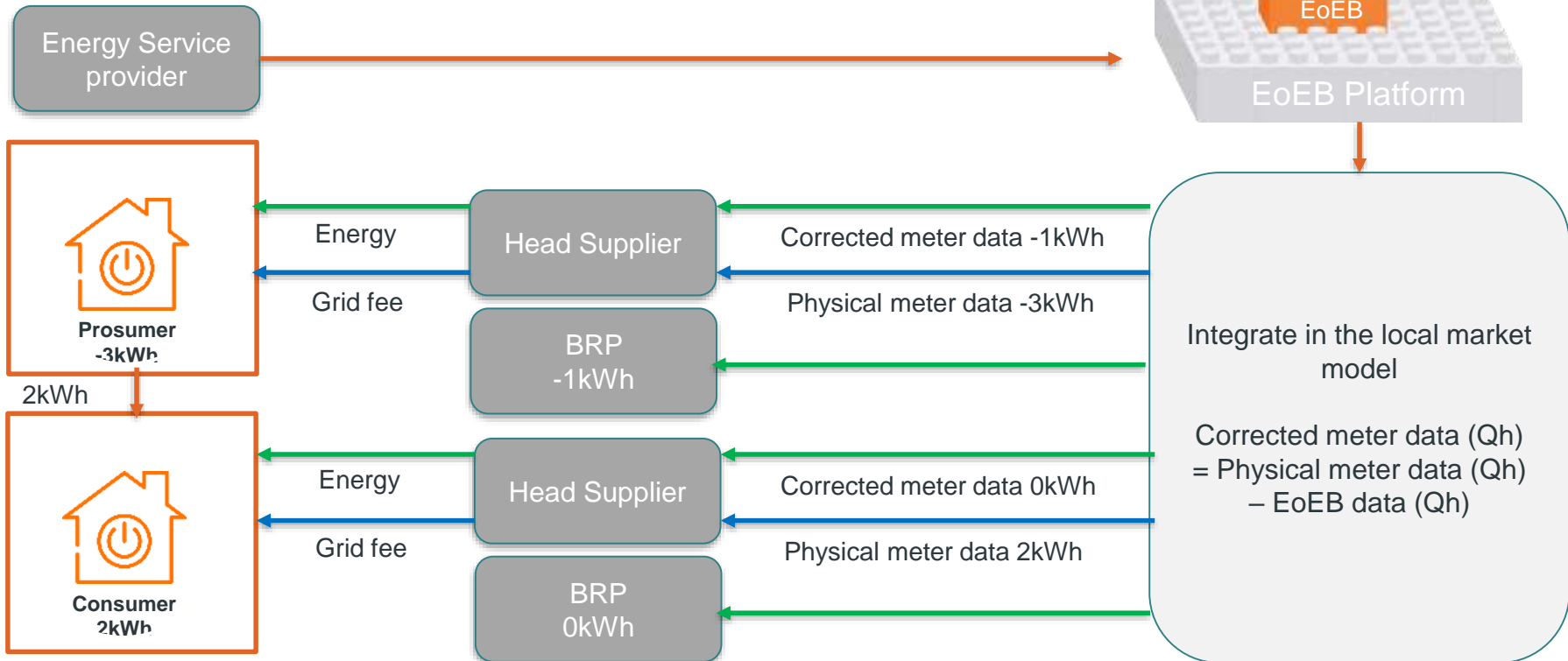


Step 4 – Settlement – integrated in the existing market model

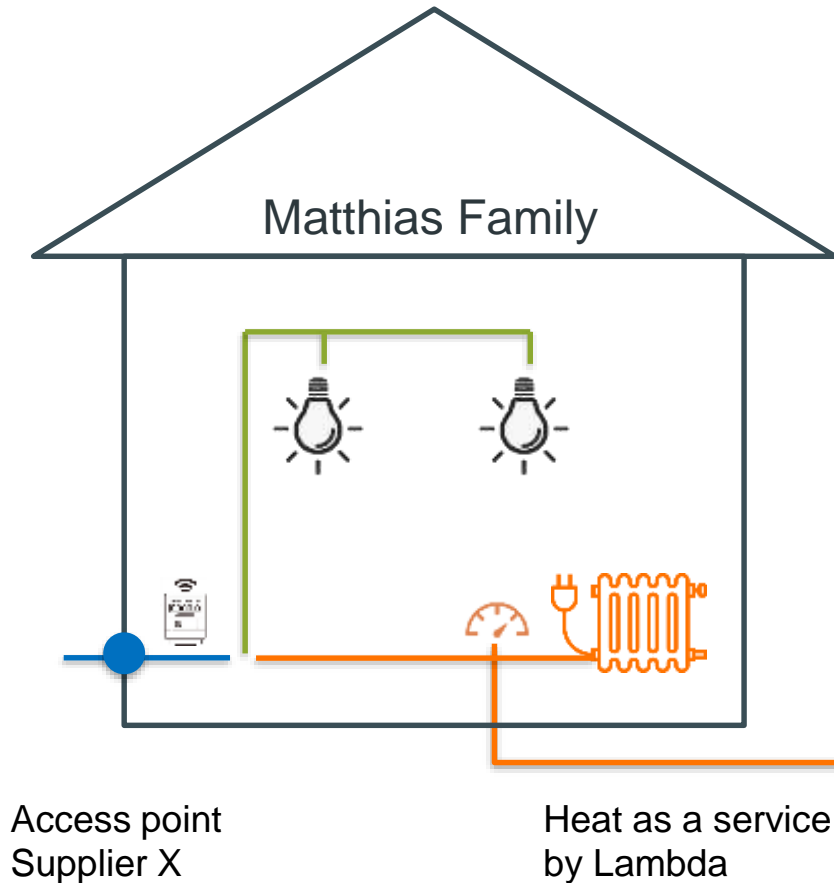


Settlement

Peer to Peer



Example of a Split Supply



Lambda is a known Energy Service Provider & Electricity Supplier with a BRP
Matthias & the access point are known by the system.



Matthias signs a contract with Lambda for heat as a service in which Lambda optimizes the heating on various parameters.

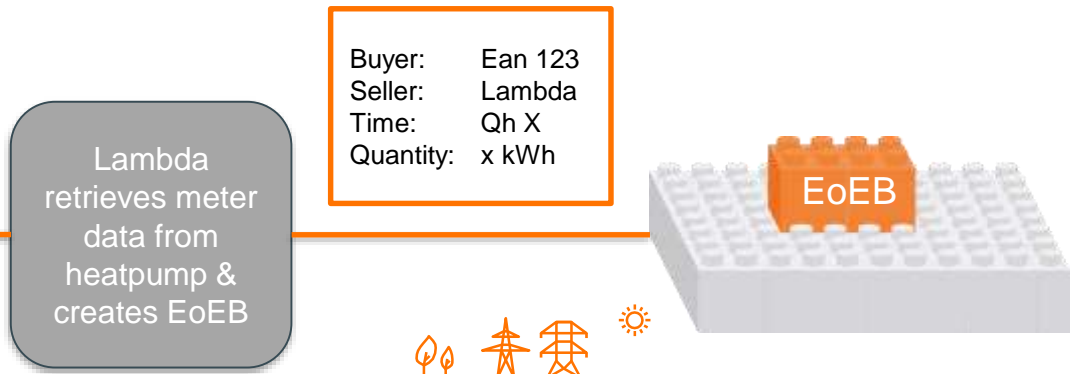
Matthias signs that he accepts all EoEB created by Lambda



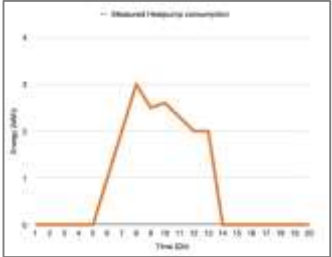
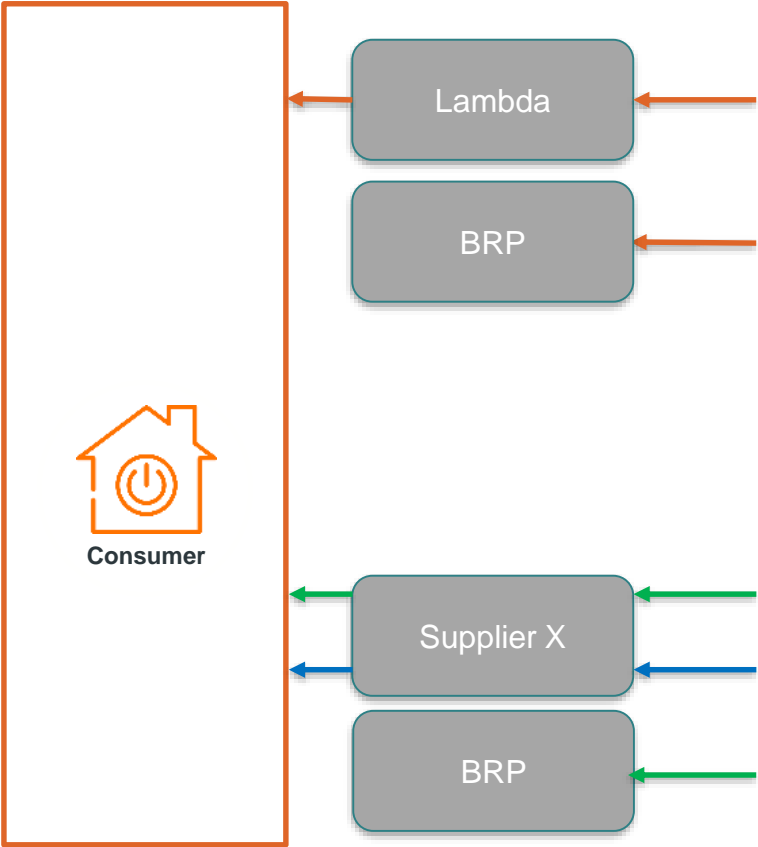
Lambda steers the heatpump (comfort, green generation, peak consumption, real time price...) in line with the product & creates EoEB for the energy delivery



Matthias buys the standard consumption from his Supplier
Matthias pays lambda for heat as a service, including the energy.

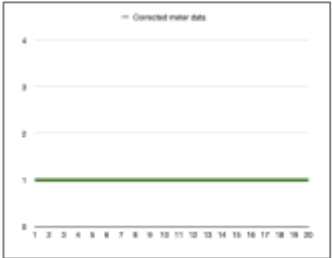


Resulting Energy settlement

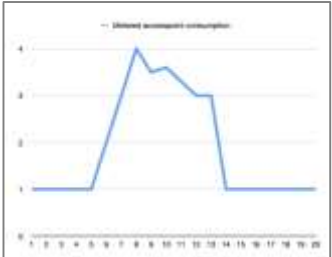


Lambda sells the energy to the consumer via the Heat as a service contract.

The BRP assigned by Lambda is financially responsible for the energy resulting from the EoEB.



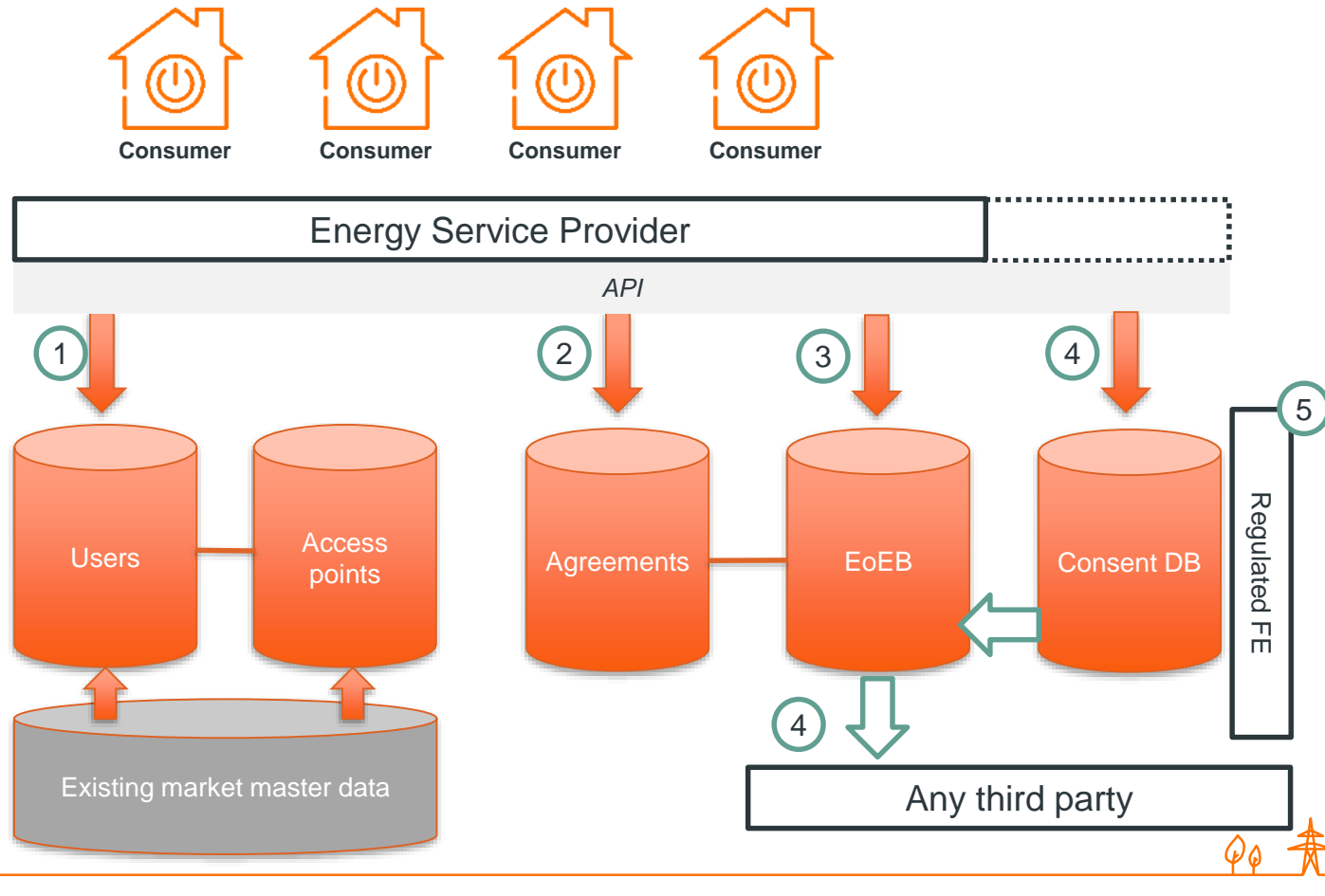
Supplier X sells the residu to the consumer. His BRP takes the financial responsibility of the residu.



Supplier X invoices grid fee's to the consumer, as is done today.



EoEB HUB System

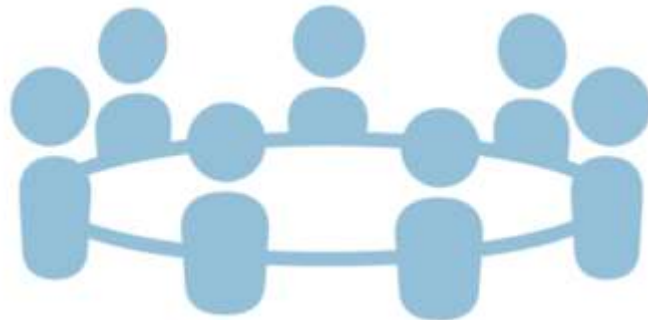


- 1 Manage Users & delegates
- 2 Create auto validation agreements
- 3 Creation & validation of EoEB
- 4 Providing consent to distribute EoEB, data & contracts to third parties
- 5 Regulated interface for "emergencies" only

Remark: EoEB HUB on this slide is illustrated as central system, however can be decentral, managed through SO governance.



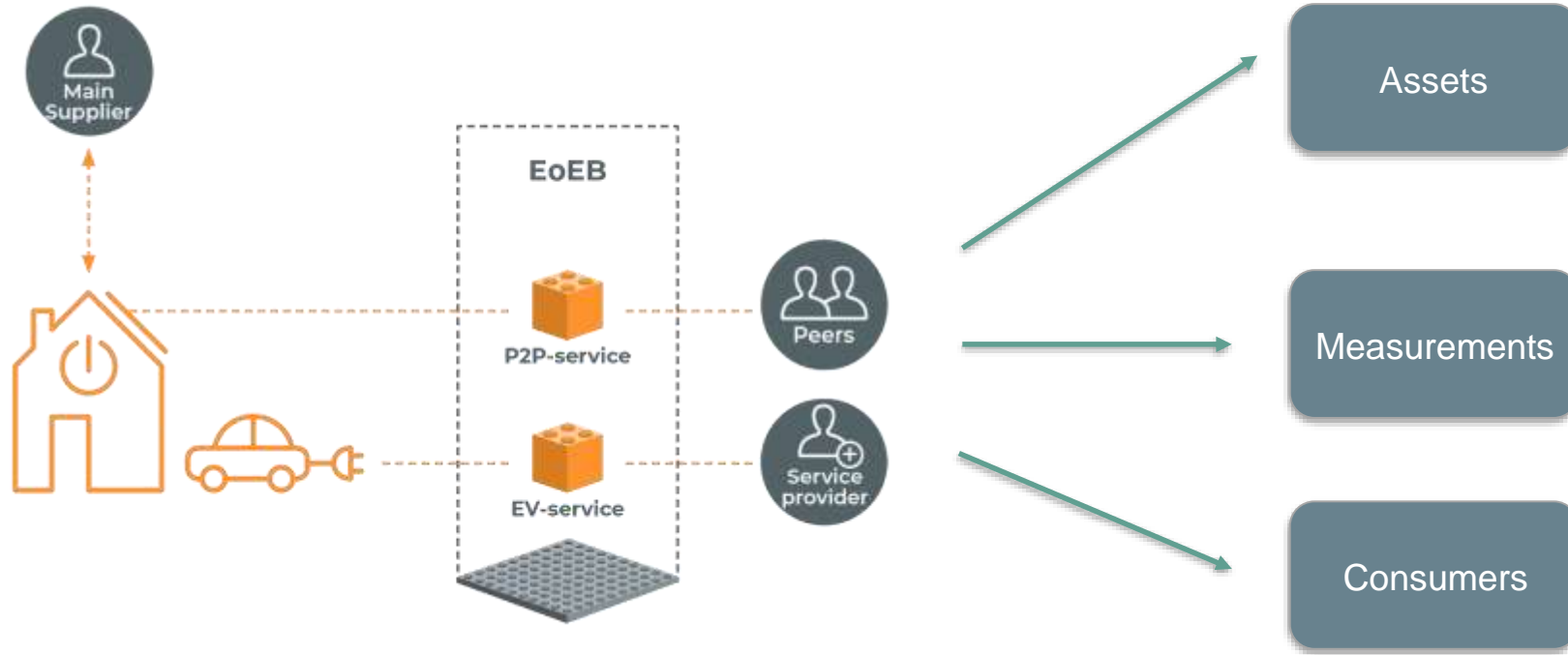
Open discussion



Data



EoEB Data



EoEB Data - Assets



Unique identifier to avoid double counting of flexibility across multiple service providers



Trust that the asset is existing and that the master data is correct so that contract can be created correctly



Follow up assets that follow existing market processes so that contracts stay up to date



Follow up assets that don't follow existing market processes so that contracts stay up to date



EoEB Data - Measurements



Enabling data access for behind-the-meter measurements through regulated tools for creating EoEB



Increase data quality and security through a Seal-of-Approval to increase trust in the system



Standardisation to allow easy switching between service providers as a consumer



Exchanging data in a secure and transparent way for the consumer compliant to GDPR



EoEB Data - Consumers



Make sure that behind a contract there is the right physical person



Allowing family members to interact on behalf-of



Possibility to make the link between assets and consumers



Allow consumers to exercise their rights according to GDPR



Centralisation versus decentralisation

Traditional system

Centralised way of working

Assets

- Limited amount of assets
- Asset information defined by one trusted party

Measurements

- Measurement from a regulated party
- In a standard format

Consumers

- Consumer identified by EAN directly linked to the asset
- Data sharing on legal basis

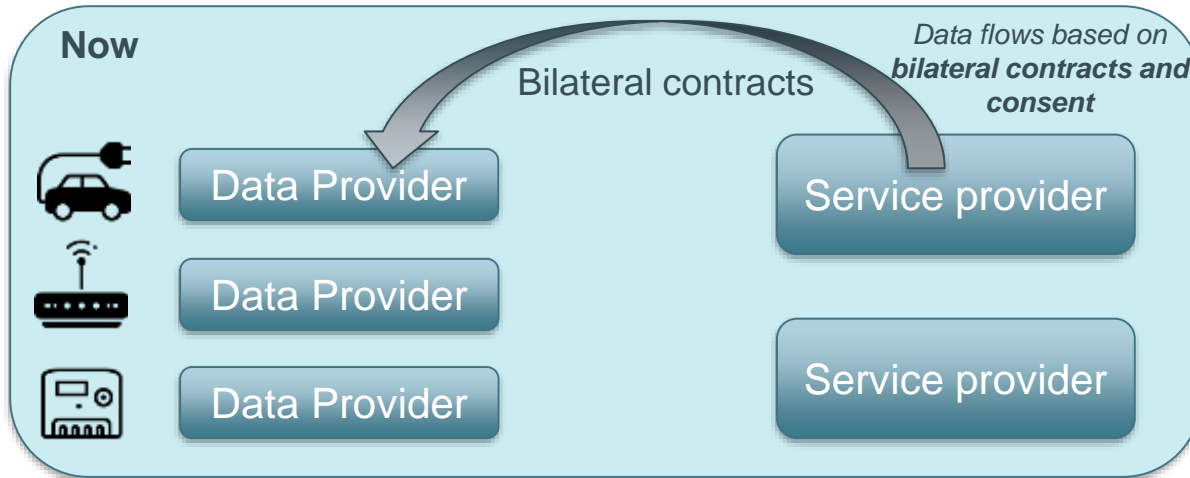
Consumer Centric system

A more decentralised way of working

- Large amount of assets
- Asset information defined by different parties like OEM, installers

- Measurements done by different parties
- In a non-standardized format

- Split consumer and assets
- More data sharing based on consent



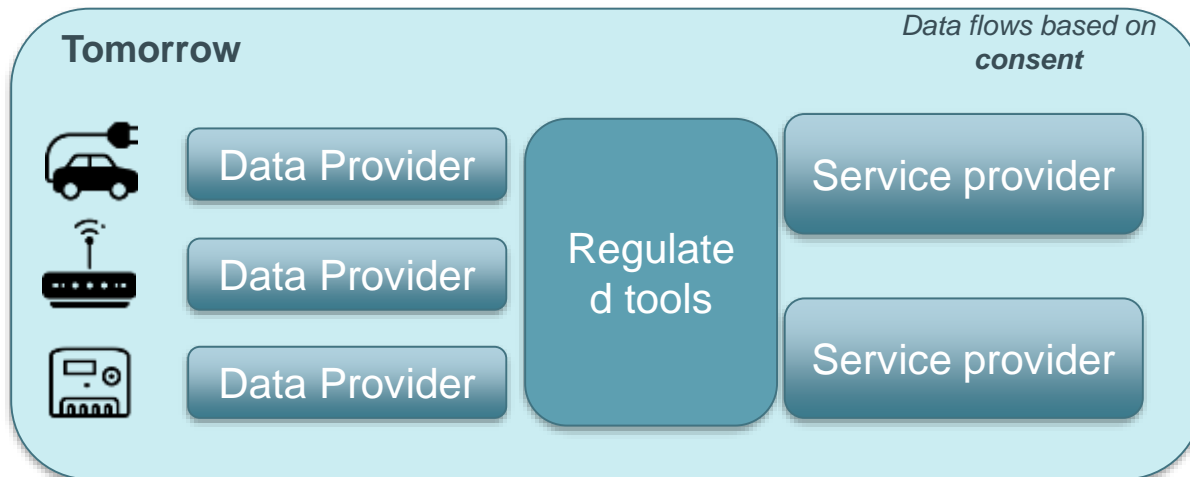
Regulated Tools

Connect data providers and service providers: Consent should define data streams, not bilateral contracts

Level playing field for Energy-as-a-Service: Service providers should have access to consumer's data based on their consent, not the capability on installing devices

Increase consumer's trust in the EaaS market: Services connected to the regulated platform are trustworthy and can deliver a qualitative service

Foresee fair data price for data providers: Data providers should receive a fair remuneration for delivering their data



RED 3: Article 20

In addition to the requirements in [the proposal for a Regulation concerning batteries and waste batteries, repealing Directive 2006/66/EC and amending Regulation (EU) No 2019/1020], Member States shall ensure that manufacturers of domestic and industrial batteries enable real-time access to basic battery management system information, including battery capacity, state of health, state of charge and power set point, to battery owners and users as well as to third parties acting on their behalf, such as building energy management companies and electricity market participants, under non-discriminatory terms and at no cost.

Member States shall ensure that vehicle manufacturers make available, in real-time, in-vehicle data related to the battery state of health, battery state of charge, battery power setpoint, battery capacity, as well as the location of electric vehicles to electric vehicle owners and users, as well as to third parties acting on the owners' and users' behalf, such as electricity market participants and electromobility service providers, under non-discriminatory terms and at no cost, in addition to further requirements in the type approval and market surveillance regulation.

Centralisation versus decentralisation

Communication of measurements can remain centralised to guarantee standardization and provide easy access for service providers...

Press release | 3 June 2021 | Brussels

Commission proposes a trusted and secure Digital Identity for all Europeans

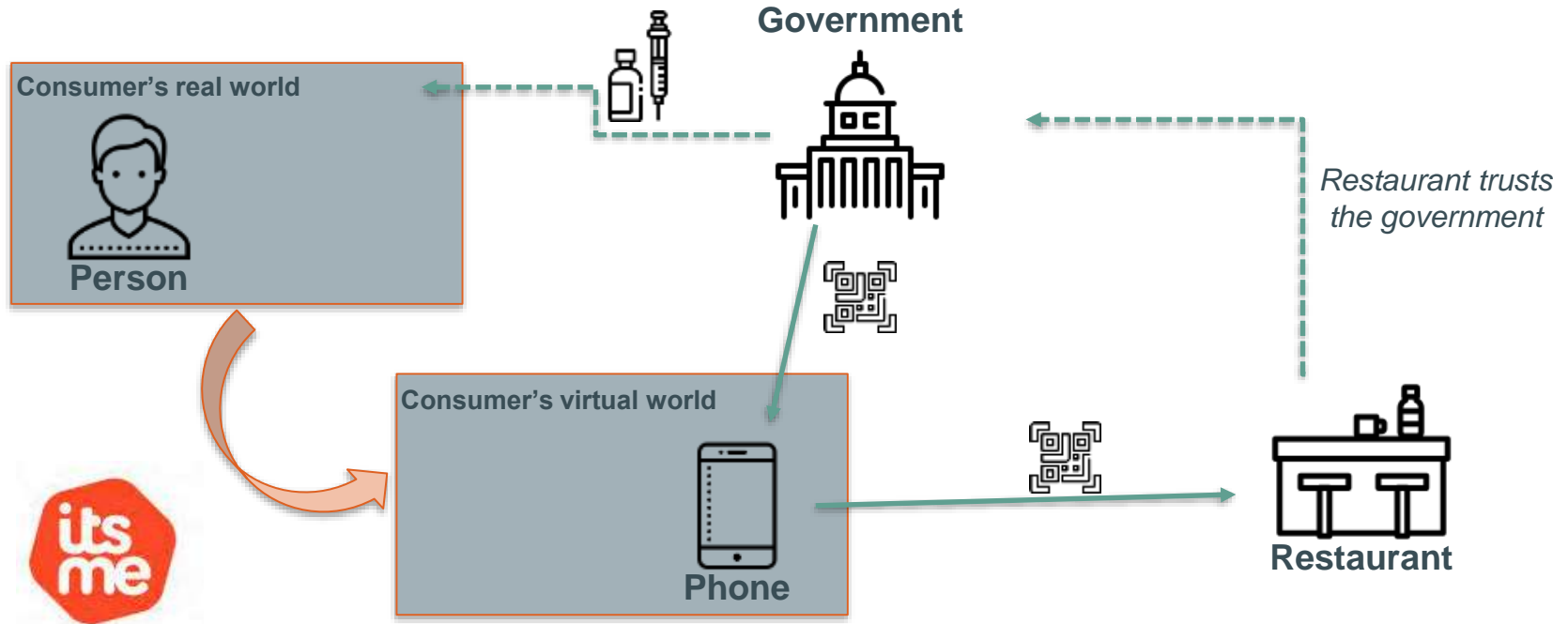


Digitale portefeuille voor elke Belg tegen 2023

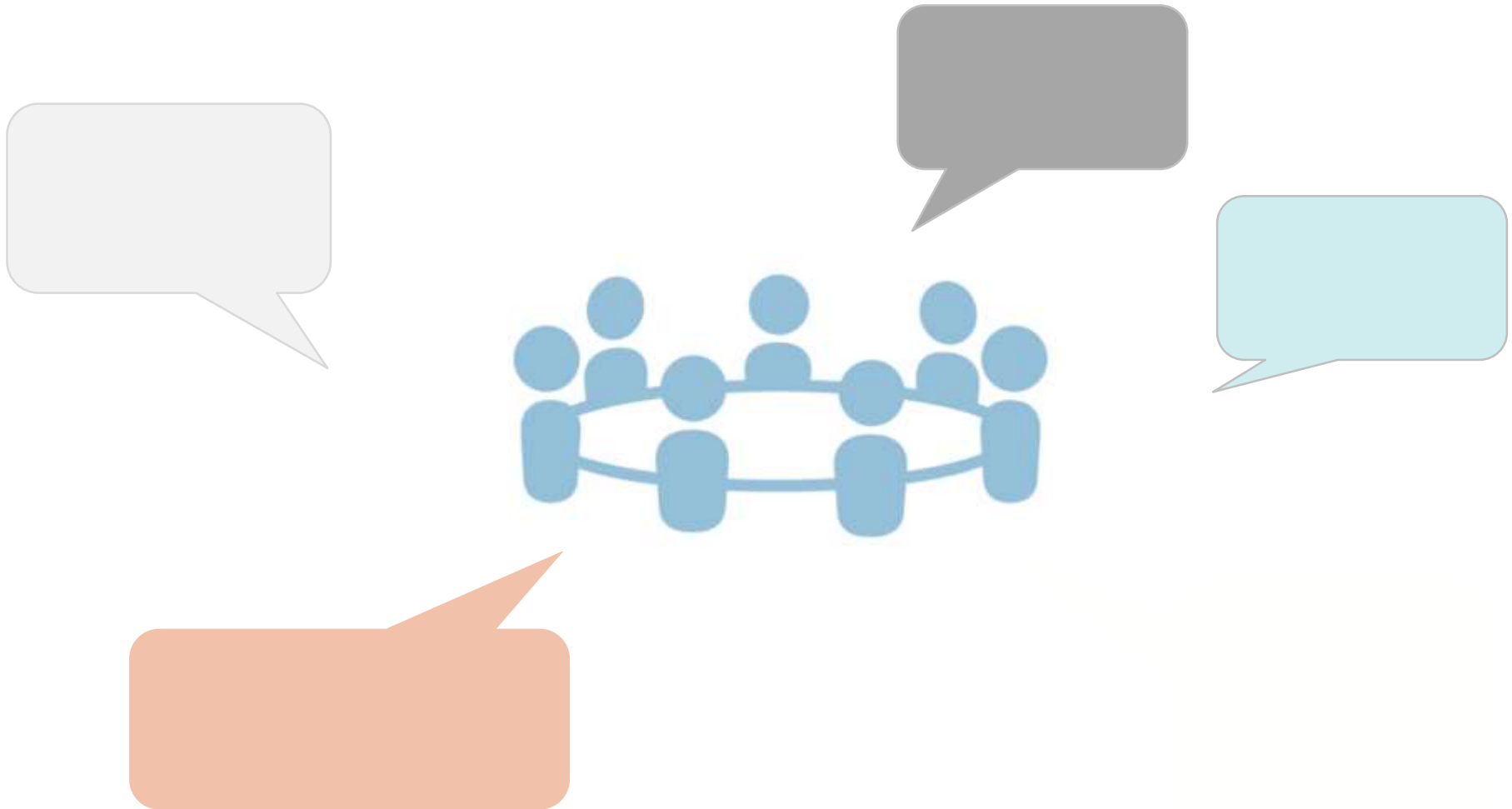
...While using a decentralized ecosystem for storage and access of asset and consumer data

In a cross sector collaboration

Decentralisation solution example



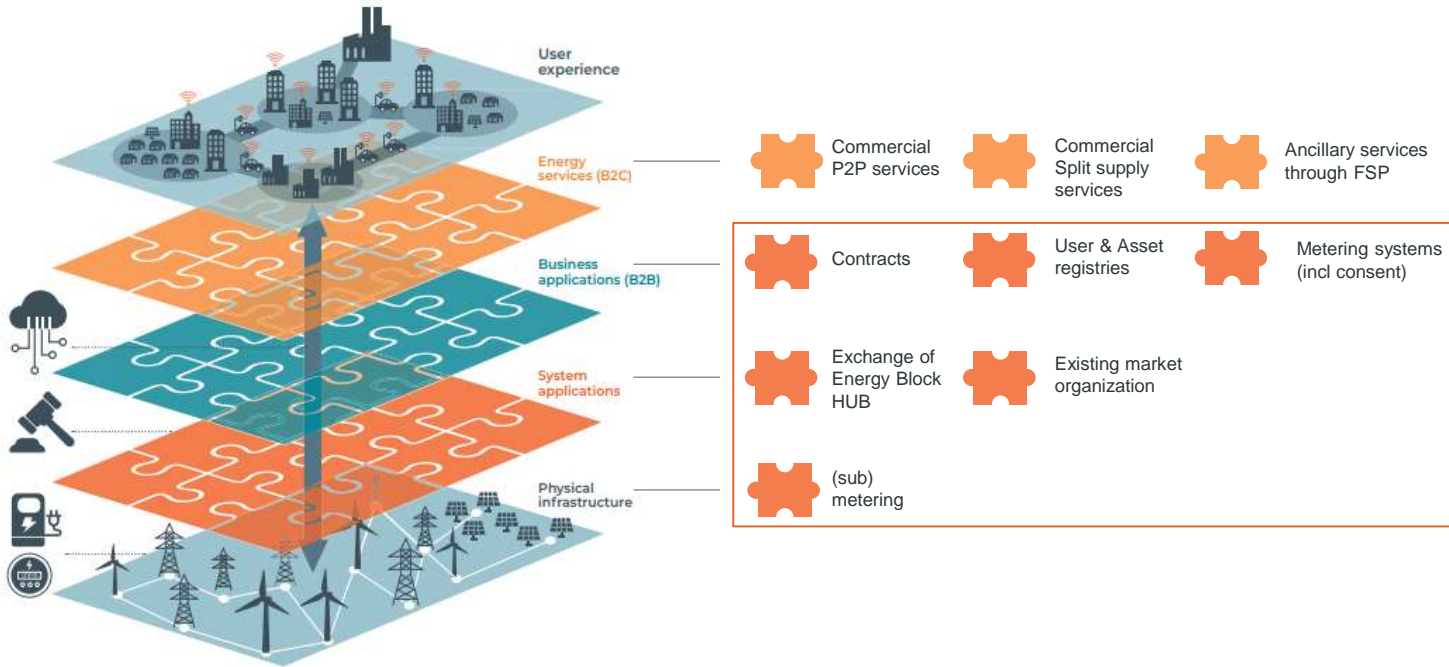
Open discussion



Ensuring a trusted system, going beyond the EoEB HUB



A consumer centric system enabling Energy transactions at the level of the consumers



Multiple components are required to enable Energy services

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EoEB HUB – Core by System operators

- Limited system layer to have no barriers for innovative products
- Integrated in the existing market organization

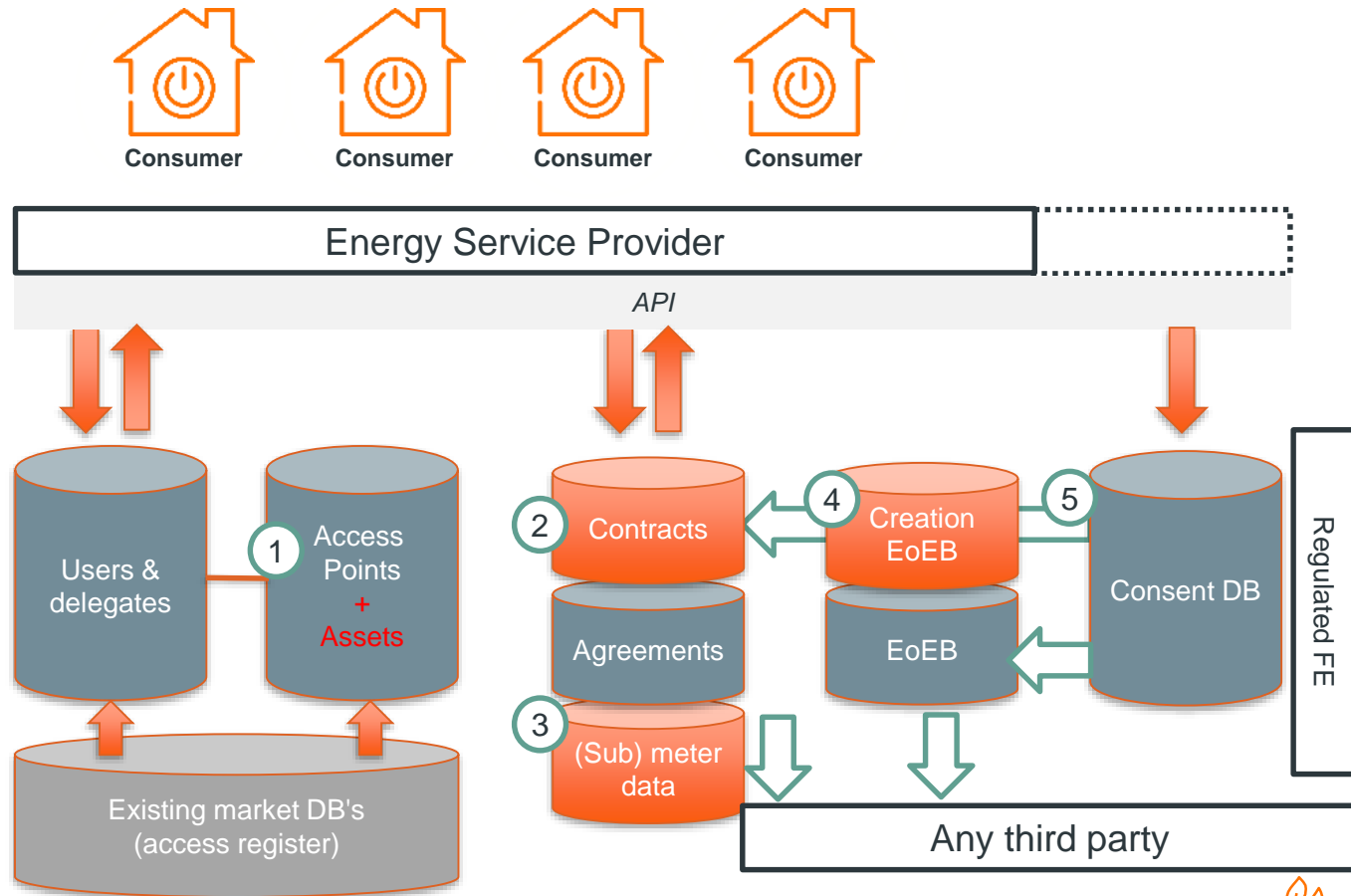
Digital tools

- Role of System operators to be defined
- Trusted, consumer centric system



EoEB HUB minimum system

Suggestions for additional information & function leading to trust & transparency



Creation of trusted EoEB

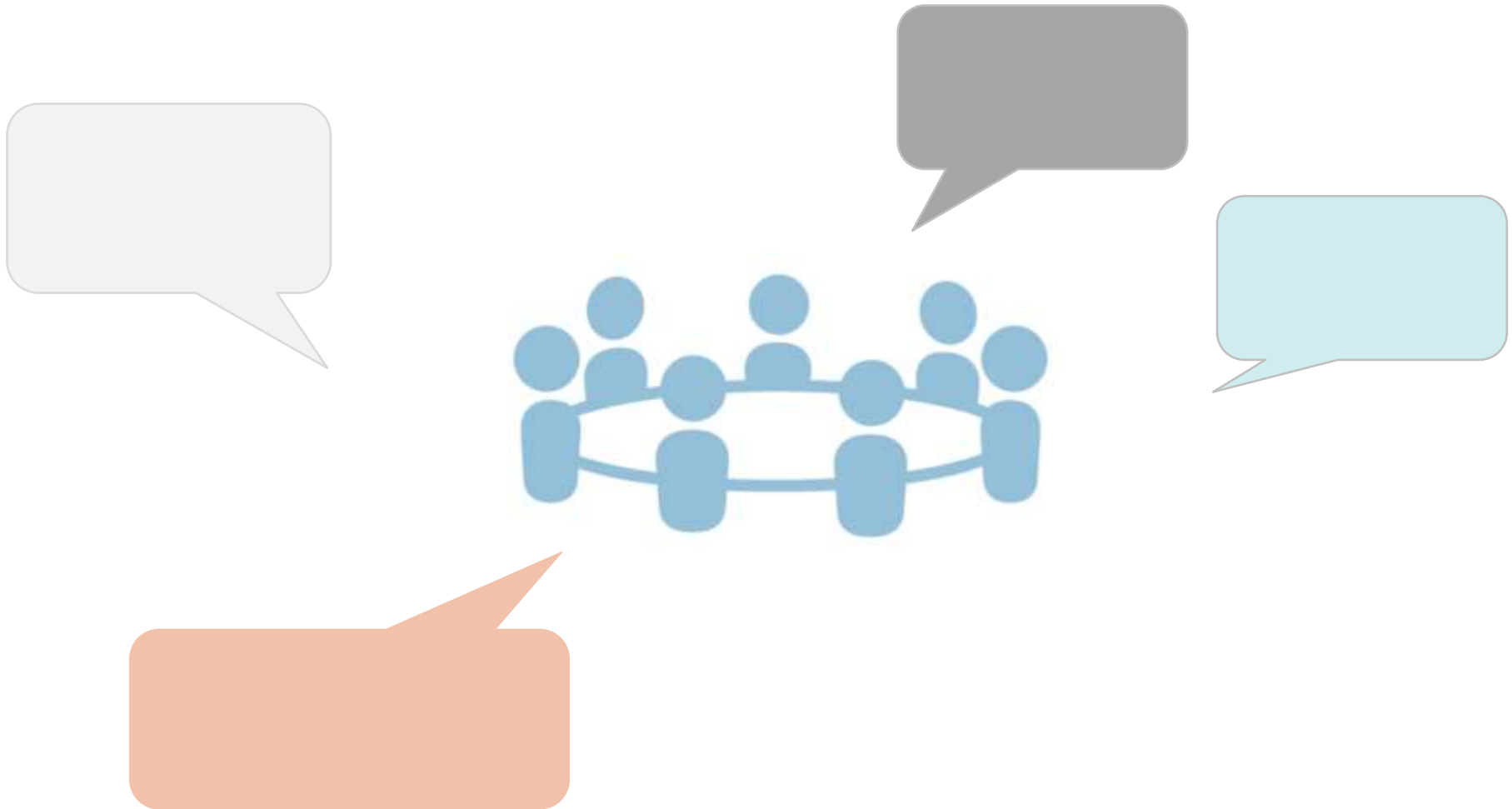
- 1 Knowing the assets on which the service will be delivered
- 2 Maintaining contractual information on the service
- 3 Retrieving submeter data
- 4 Create EoEB on behalf based on contract & (sub) meter data
- 5 Consent can be extended to ex-ante contracts & (sub) meter data

Increasing transparency potential through

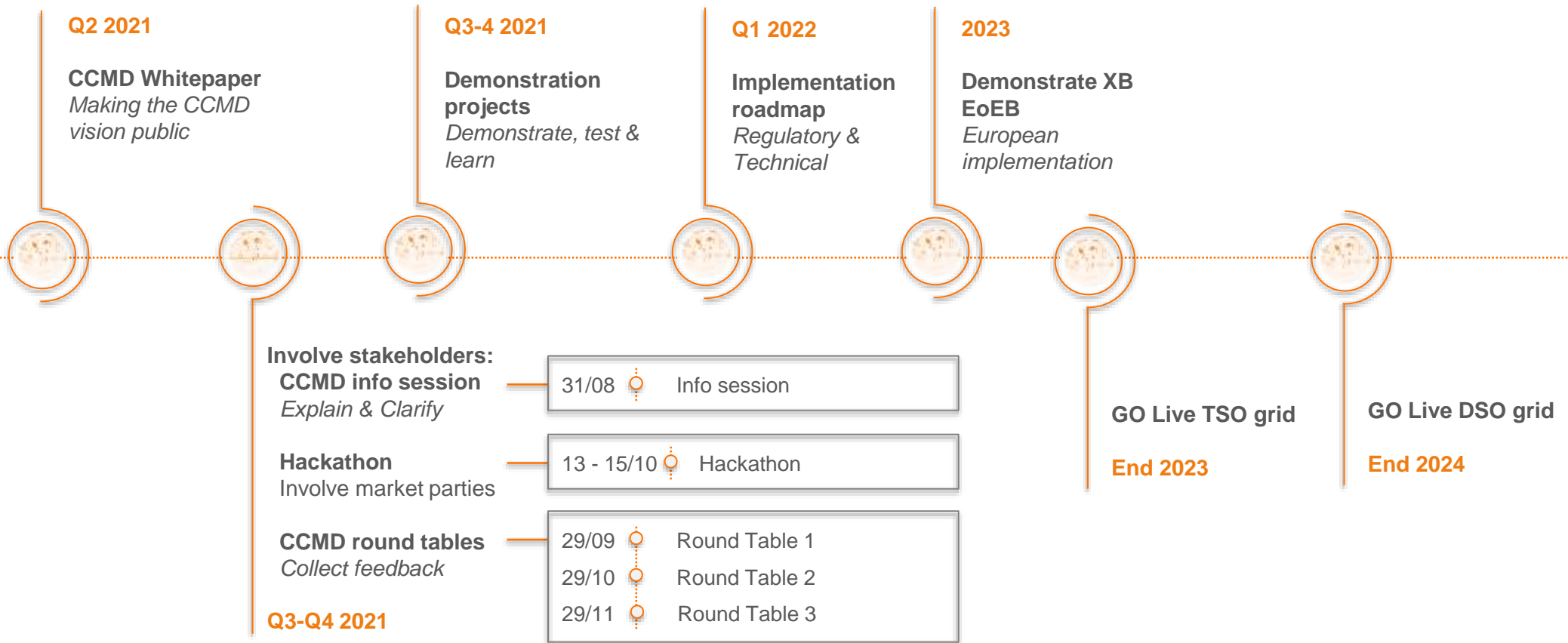
- 5 Consent can be extended to ex-ante contracts & (sub) meter data



Open discussion



Next steps to achieve our ambitions



Focus of next round table



Belgium

- Introduction to **Elia's system balance philosophy**
- How will **decentralized flexibility** contribute to the balance of the system?
- How to facilitate the participation of decentralized flexibility (in particular low voltage) to the **balancing services?**
- How to improve the **participation conditions** (ex. prequalification) in the balancing market?
- CCMD use-cases in Belgium
- **Date:** 29/11/2021

Germany



- Focus on **Virtual Balancing Areas (VBA)**
- Why is there little interest so far in the regulatory determination on the **e-mobility Grid Access Ordinance?**
- How to **ensure adequate** charging station **refinancing** for operators of charging infrastructure?
- What are challenges and possible solutions for the **technical implementation** and for **operating VBAs?**
- **Date:** Q1 2022



Backup

